

[as]



NATURAL LANGUAGE PERSONALITIES

By: Nick Sherwin



GOAL

Classify the big five personality traits
of film protagonists through their
spoken dialogue.

By looking more carefully at the ways
people convey their thoughts in language
we can begin to get a sense of their
personalities, emotions, and connections
with others.

—JAMES PENNEBAKER



DATA

- Film Corpus 2.0 and Story Dialogue
Baskin Engineering
UC Santa Cruz



TOOLS

- IBM Watson
- NLTK
- Gensim
- Spacy
- pyLDAvis

METHODOLOGY

PROCESS

01 Data Preparation + Scoping

Action/Adventure Genre, Characters w/ 100+ lines

02 Preprocessing

Regex, Porter Stemmer, Gensim_Bi-Grams, Lemmatization

03 Topic Modeling

Latent Dirichlet Allocation, pyLDavis

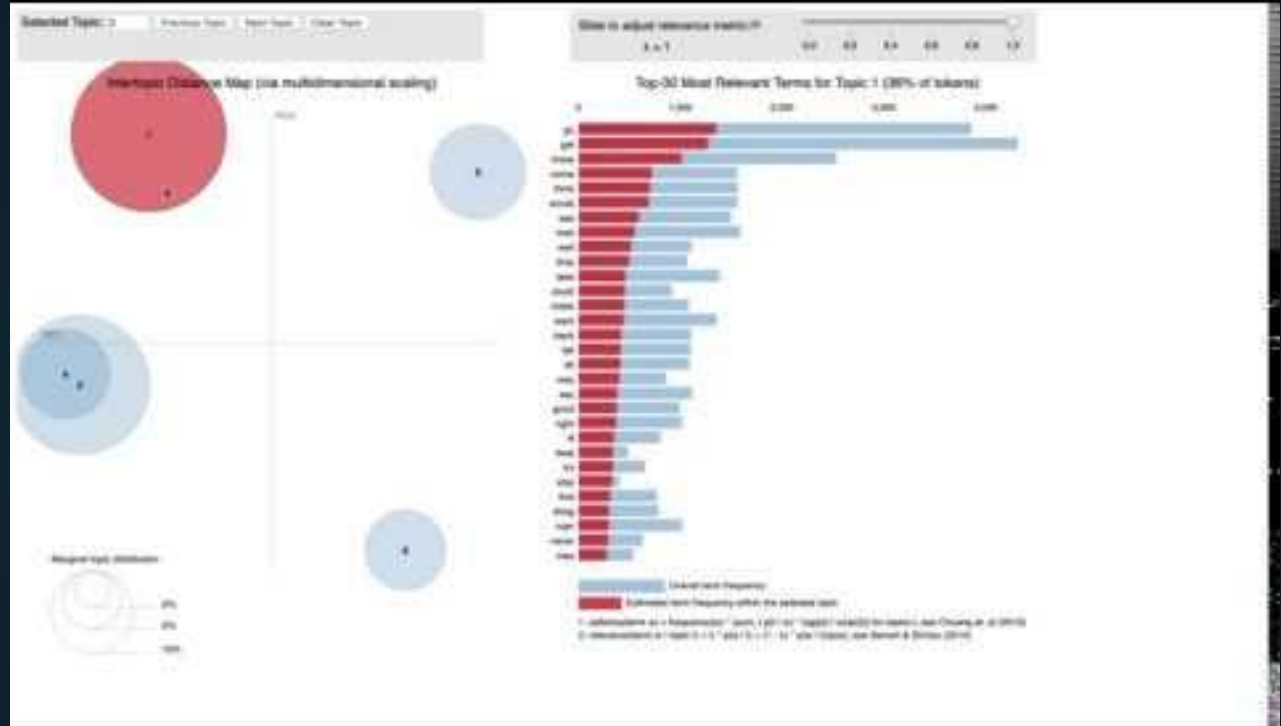
04 Personality Mapping

IBM Watson Personality Insights

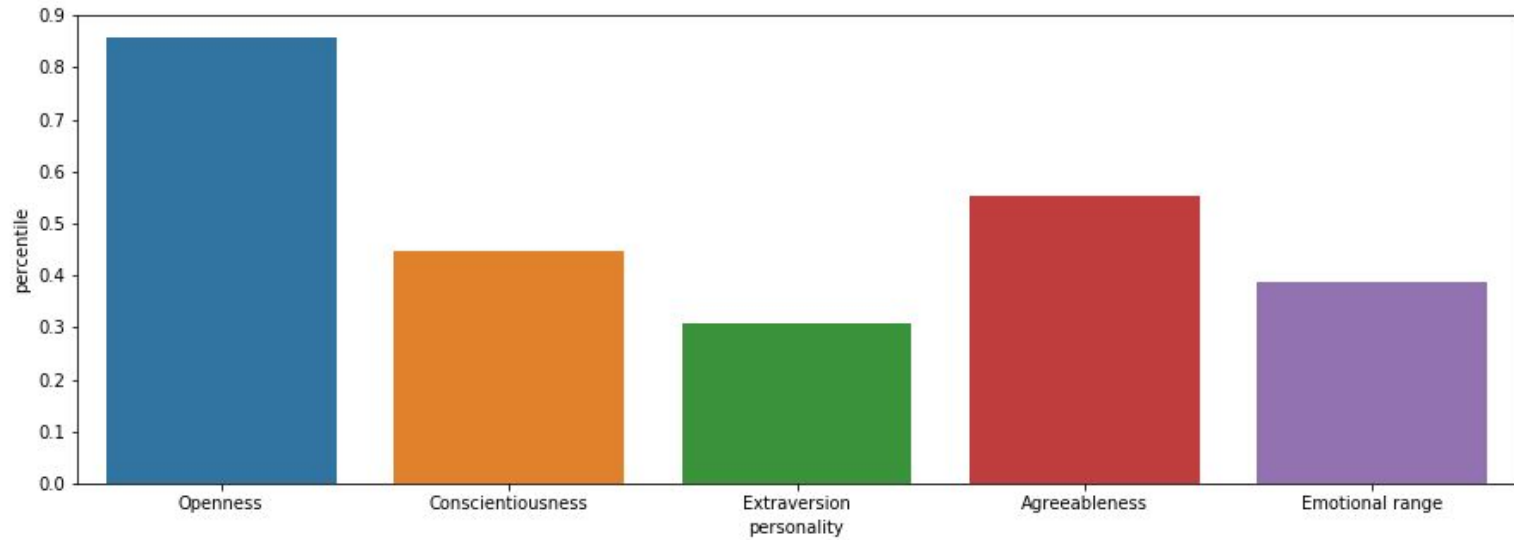
FINDINGS

- Power/Commanding Words (**Go, Get, Want Come**)
- Misogynistic Words (**Baby, Love, Fuck, Make**)

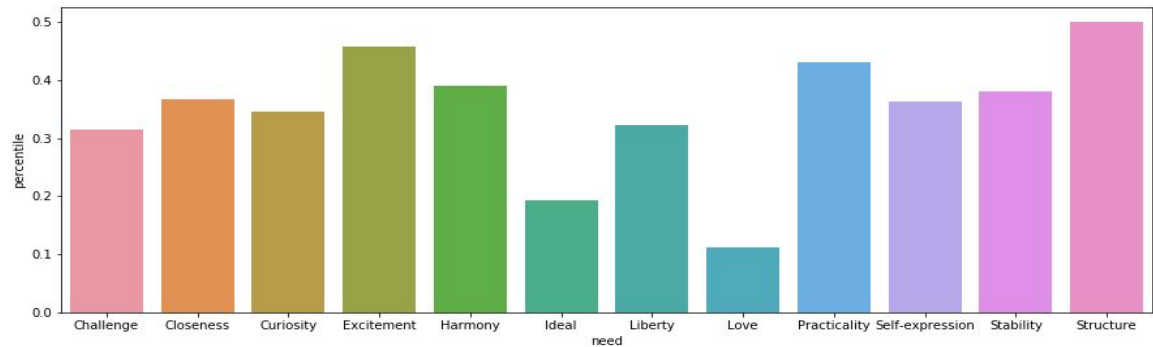
"Let me simplify it for you. Kick some ass, get the girl, and try to look dope while you do it" – Xander Cage



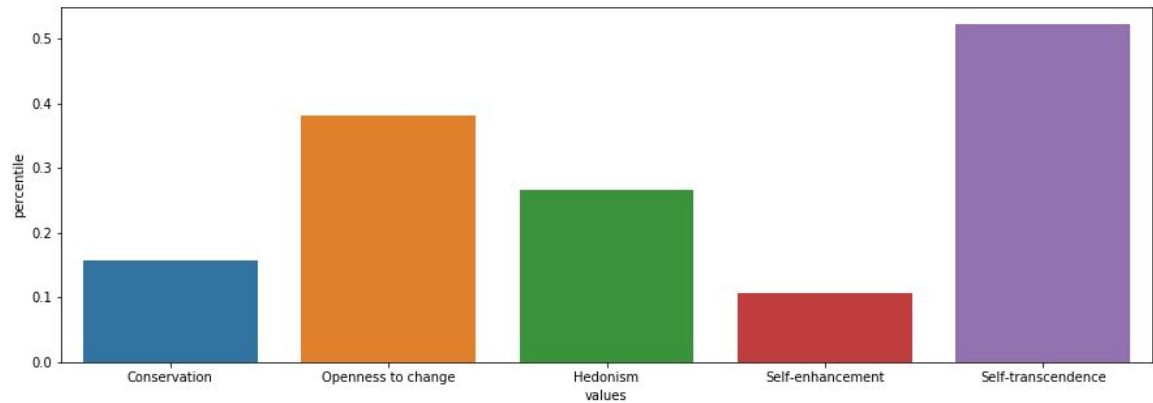
PERSONALITY



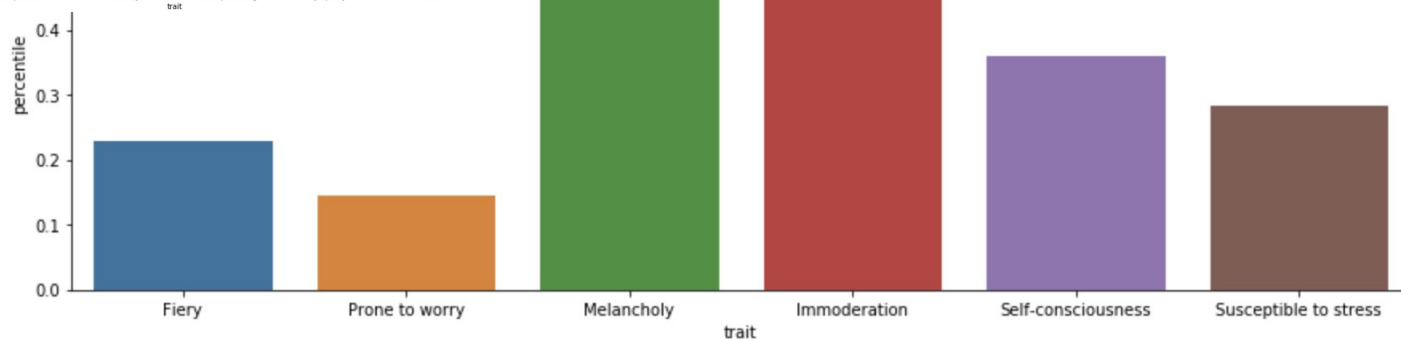
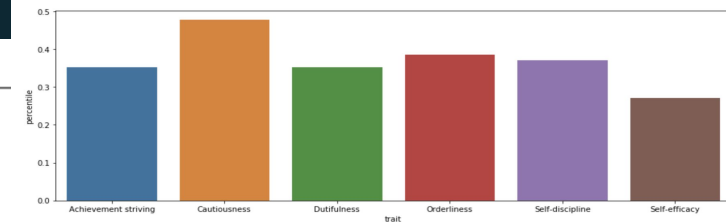
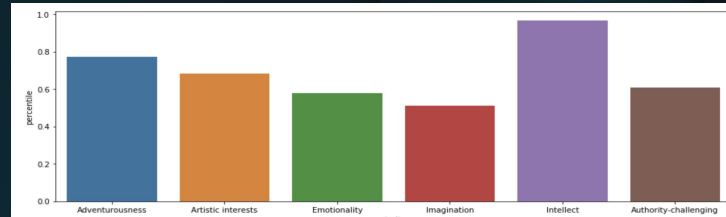
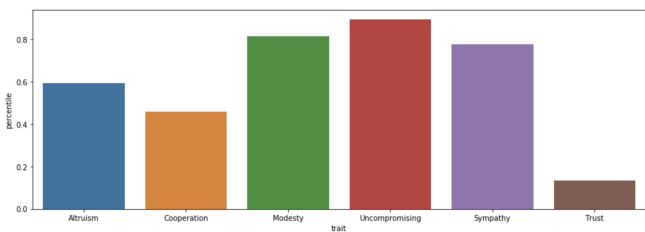
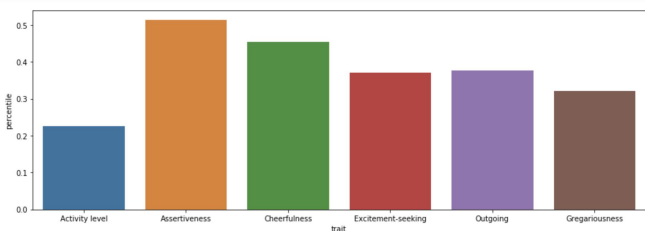
NEEDS



VALUES



PERSONALITY (Subtraits)



Conclusions

- We can indeed capture patterns of speech and by extension, personality in protagonists.
- Extreme care must be taken in crafting the generative piece (misogyny in, misogyny out)

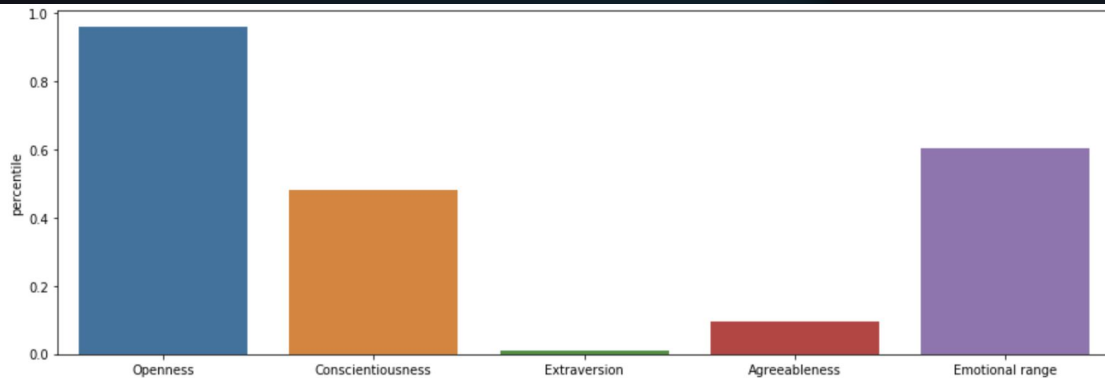
Future Work

- Build database of Personality Profiles
- Built application on top of the IBM Personality Insights platform
- Match user's big five personality profile as closely as possible with character profiles in their selected genre
- Compare findings with Pennebaker's LIWC



Questions?

<https://github.com/nicholassherwin/>



You are inner-directed and shrewd.

You are philosophical: you are open to and intrigued by new ideas and love to explore them. You are empathetic: you feel what others feel and are compassionate towards them. And you are independent: you have a strong desire to have time to yourself.

Experiences that give a sense of discovery hold some appeal to you.

You are relatively unconcerned with achieving success in life. You make decisions with little regard for how they show off your talents. And you prefer activities with a purpose greater than just personal enjoyment.

GANDALF's Big 5

